

CLAIM AMENDMENTS

1. (Currently Amended) A dichroic prism comprising a first right angle prism, a second right angle prism, a third right angle prism, and a fourth right angle prism, each right angle prism having a first and second side faces substantially perpendicular to each other, wherein the dichroic prism is a columnar body having a square shape in lateral cross section, the columnar body including: a first bonded face formed by bonding the first side face of the first right angle prism and the second side face of the second right angle prism; a second bonded face formed by bonding the first side face of the second right angle prism and the second side face of the third right angle prism; a third bonded face formed by bonding the first side face of the third right angle prism and the second side face of the fourth right angle prism; and a fourth bonded face formed by bonding the first side face of the fourth right angle prism and the second side face of the first right angle prism, wherein

the first bonded face and the third bonded face ~~have~~ include dichroic films for first color light, which reflect the first color light and transmit therethrough second color light, different in color from the first color light,

~~wherein~~ the second bonded face and the fourth bonded face ~~have~~ include dichroic films for the second color light, which reflect the second color light and transmit the first color light therethrough,

~~wherein~~ the second bonded face and the fourth bonded face are arranged ~~on~~ in the same plane, and

~~wherein~~ the third bonded face is deviated from the first bonded face by a predetermined distance.

2. (Currently Amended) The dichroic prism according to claim 1, wherein the predetermined distance is ~~one, in which~~ chosen so that an image ~~formed~~ of the first color light, having predetermined reference image information, coincides with an image corresponding to the reference image information, the first color light being ~~allowed to be~~ incident ~~onto~~ on the first and third bonded faces and ~~being reflected thereon~~ reflected therefrom.

3. (Currently Amended) The dichroic prism according to claim 1, wherein the first color light is light having a first color ~~constituting~~ of three primary colors of light, the second color light is light having a second color ~~constituting~~ of the three primary colors of light, and

the dichroic film for the first color light and the dichroic film for the second color light can transmit therethrough a ~~remaining~~ third color ~~constituting~~ of the three primary colors of light.

4. (Currently Amended) A dichroic prism manufacturing method, comprising:
a first step of preparing a first right angle prism, a second right angle prism, a third right angle prism, and a fourth right angle prism, each having first and second side faces substantially perpendicular to each other;
a second step of forming a dichroic film for first color light on the first side face of the first right angle prism, the dichroic film for the first color light reflecting the first color light and transmitting therethrough second color light different in color from the first color light, and forming a dichroic film for the second color light on the second side face of the first angle prism, the dichroic film for the second color light reflecting the second color light and transmitting the first color light therethrough;
a third step of forming the dichroic film for the second color light on the first side face of the second right angle prism;
a fourth step of forming the dichroic film for the first color light on the second side face of the fourth right angle prism;
a fifth step of arranging the second side face of the first right angle prism and the first side face of the second right angle prism ~~on~~ in the same plane, and ~~of~~ bonding the first side face of the first right angle prism and the second side face of the second right angle prism, thus manufacturing a first bonded prism in which a first bonded face ~~having~~ includes the dichroic film for the first color light ~~is formed~~;
a sixth step of arranging the second side face of the third right angle prism and the first side face of the fourth right angle prism on the same plane, and ~~of~~ bonding the first side face of the third right angle prism and the second side face of the fourth right angle prism, thus manufacturing a second bonded prism in which a third bonded face ~~having~~ includes the dichroic film for the first color light ~~is formed~~;
a seventh step of constituting a pre-dichroic prism by ~~allowing~~ locating a first plane, which is formed of the second side face of the first right angle prism and the first side face of the second right angle prism in the first bonded prism, and a second plane, which is formed of the second side face of the third right angle prism and the first side face of the fourth right angle prism in the second bonded prism, ~~to face to~~ facing each other and ~~to contact~~ contacting each other;

an eighth step of adjusting a position of the second bonded prism with respect to the first bonded prism such that an image formed of the first color light having predetermined reference image information coincides with an image corresponding to the reference image information, the first color light being ~~allowed to be incident onto~~ on the first and third bonded faces in the pre-dichroic prism and ~~being reflected thereon therefrom~~, thus deviating the first bonded face and the third bonded face from each other; and

a ninth step of bonding the first bonded prism and the second bonded prism, thus forming the second bonded face and the fourth bonded face, each ~~having~~ of the second and fourth bonded faces including the dichroic film for the second color light.

5. (Currently Amended) The dichroic prism manufacturing method according to claim 4, further comprising:

a tenth step of forming the dichroic film for the first color light on the first side face of the first right angle prism, the tenth step replacing the second step and the third step;

an eleventh step of forming the dichroic film for the second color light on any one of the first plane, which is formed of the second side face of the first right angle prism and the first side face of the second right angle prism in the first bonded prism, and the second plane, which is formed of the second side face of the third right angle prism and the first side face of the fourth right angle prism in the second bonded prism, the eleventh step replacing the seventh step; and

a twelfth step of ~~allowing~~ contacting the first bonded prism and the second bonded prism ~~to contact with~~ each other with the dichroic film for the second color light interposed therebetween, thus constituting the pre-dichroic prism.

6. (Currently Amended) The dichroic prism manufacturing method according to claim 4, ~~wherein an ultraviolet curable resin is used for~~ including bonding the first right angle prism and the second right angle prism, ~~for~~ bonding the third right angle prism and the fourth right angle prism, and ~~for~~ bonding the first bonded prism and the second bonded prism, with an ultraviolet curable resin, the ultraviolet curable resin having the same refractive index as refractive indices of the first ~~to~~ second, third, and fourth right angle prisms and ~~being cured by being irradiated~~ irradiating the ultraviolet curable resin with ultraviolet ~~rays~~ light.

7. (Currently Amended) The dichroic prism manufacturing method according to claim 4, wherein

the first color light is light having a first color ~~constituting~~ of three primary colors of light,

the second color light is light having a second color ~~constituting~~ of the three primary colors of light, and

the dichroic film for the first color light and the dichroic film for the second color light can transmit therethrough a ~~remaining~~ third color ~~constituting~~ of the three primary colors of light.

8. (Currently Amended) A dichroic prism manufacturing device used for performing the dichroic prism manufacturing method according to claim 4, comprising:

a holder having a holding portion which holds the first bonded prism;

a slide unit ~~provided~~ mounted slidably on the holder, the slide unit ~~being allowed to contact~~ contacting the second bonded prism ~~arranged~~, to constitute the pre-dichroic prism, ~~together~~ with the first bonded prism held by the holder, and sliding the second bonded prism with respect to the first bonded prism;

a position adjustment unit for sliding the slide unit with respect to the holder, the position adjustment unit being attached to the slide unit;

a light source unit for ~~making the light incident on~~ irradiating the pre-dichroic prism held by the holding portion with light; and

an image display unit for displaying the image formed of the light from the light source unit, the light being ~~made~~ incident ~~onto~~ on the pre-dichroic prism held on the holder and being reflected ~~on~~ from the first bonded face and the third bonded face.